INVESTMENT PORTFOLIO CONSTRUCTION METHOD AND SYSTEM

ABSTRACT OF THE INVENTION

A method and a system constructs an investment portfolio characterized by a utility function which includes two segments. The first segment is a log-utility function indicative of the portfolio holder's utility for positive rates of return and reflects the portfolio holder's desire for portfolio growth. The second segment is a power-utility function with a negative power indicative of the degree to which the portfolio-holder is averse to losses, i.e., negative rates of return. The two-segment utility function is continuously differentiable over the entire range of portfolio returns. A mathematical programming algorithm selects investment weights of the assets in the portfolio to maximize the portfolio's expected utility which is based on a two-segment utility function. The asset weights, in turn, are selected so as to account for the probability of the future occurrences of different economic events. A computer software includes modules for carrying out the optimization to select asset weights and to thereby construct the portfolio. The computer software is in the form of codes executed by a processor.

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